

Basic Measuring Skills

Learning Objectives

After completing this tutorial, you will be able to:

- Know the meanings of basic vocabulary used when measuring
- Convert between Centimetres and Millimetres
- Use a ruler to measure correctly

Required Competencies

Before starting this tutorial, you should :

- Have basic numeracy skills
- Know what a centimetre and a millimetre is

Basic vocabulary

In the Design and Technology department there are many new words to learn and to know the meanings of.

Task

Copy the table below onto an A4 piece of paper and in the boxes labeled sketch, draw what you think is the meaning of each word.

Word	Meaning	Sketch
Vertical	A line drawn straight up and down	
Horizontal	A line that is drawn flat across. It does not slope up or down	
Parallel	Two or more lines which remain the same distance apart and never meet.	
Diagonal	A sloping line that is drawn from one corner of a box to another.	

Measuring

In the Design and Technology department all sizes are in millimetres. This is the unit of measurement used by all industry in this country. Another name for size is **Dimension**.

There are 10 millimetres to a centimetre.

Task

Change the following follow sizes from centimetres (cm) to millimetres (mm).

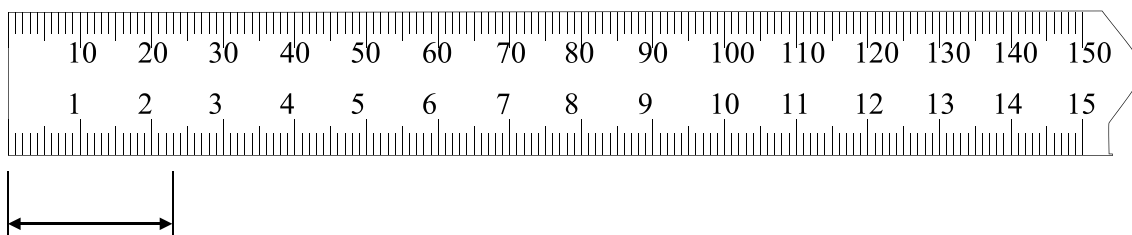
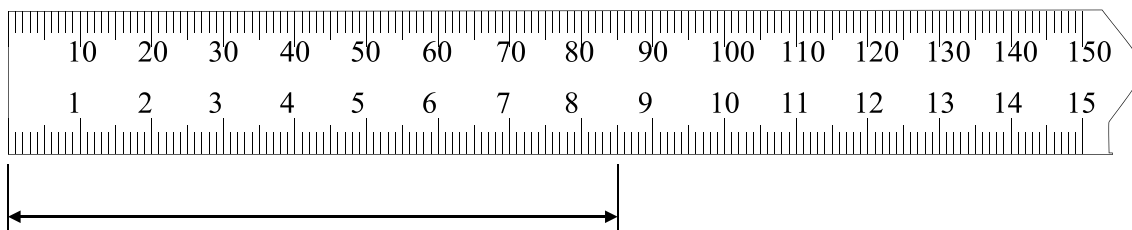
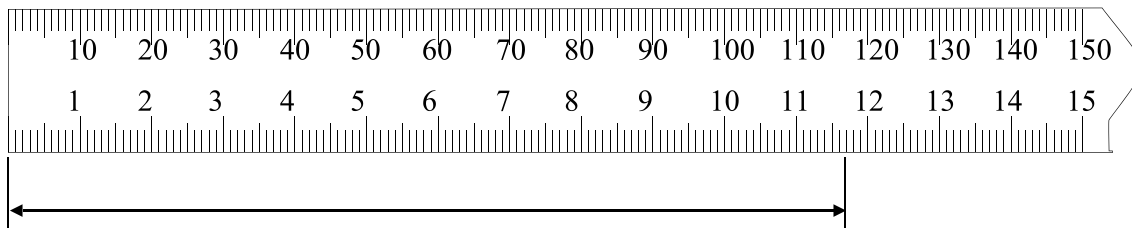
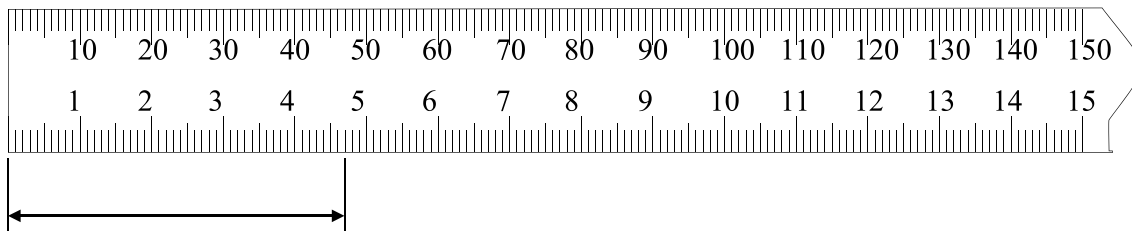
$$5.0 \text{ cm} = \text{_____ mm}$$

$$1.5 \text{ cm} = \text{_____ mm}$$

$$10.5 \text{ cm} = \text{_____ mm}$$

Task


Four rulers are shown below. The dimension lines are shown in centimetres. State the size of each dimension in millimetres.



Measuring continued

Task


State the length of each line shown below. Remember that all dimensions are in millimetres.

1. 


2. 


3. 

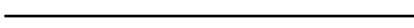
4. 


5. 

6. 

7. 

8. 

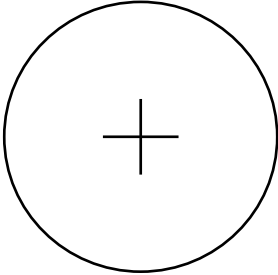
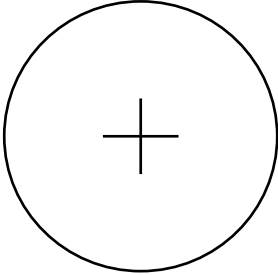
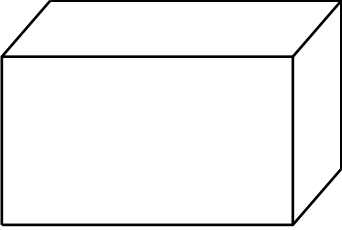
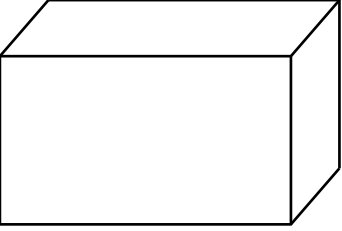
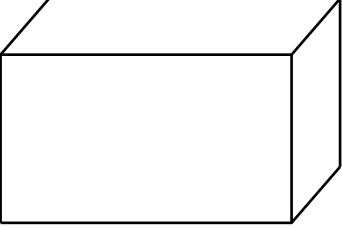
9. 

10. 

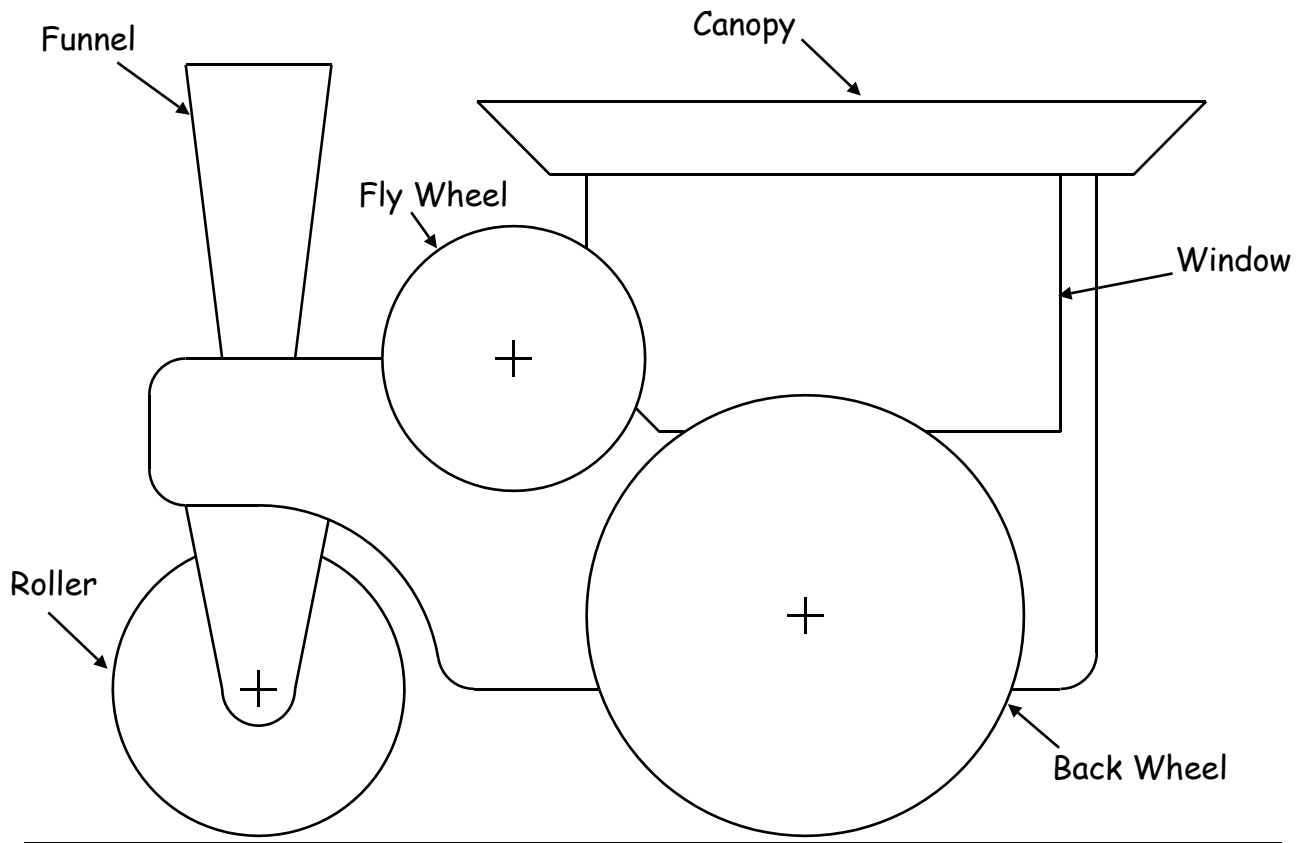
Intermediate vocabulary

Task

Copy the table below onto an A4 piece of paper.. Add what you think is the meaning of each word to **each** of the given sketches.

Word	Meaning	Sketch
Radius	The distance measured from the centre of a circle to the outside	
Diameter	The distance measured across a circle through the centre.	
Height	The size of an object measured from top to bottom	
Length	The size of an object measured from side to side	
Breath	The size of an object from front to back	

Measurement Test



A drawing of a toy road roller is given above. Measure and write down on a blank sheet of paper the following dimensions.

1. The diameter of the front roller. _____ mm
2. The diameter of the flywheel. _____ mm
3. The radius of the back wheel. _____ mm
4. The height of the top of the funnel from the ground. _____ mm
5. The length of the canopy. _____ mm
6. The distance between the top and the bottom of the canopy. _____ mm
7. The distance between the centres of the roller and the back wheel. _____ mm
8. The height from the ground to the top of the canopy. _____ mm
9. The overall height of the funnel. _____ mm
10. The height of the window. _____ mm